

Cross-State Variation in Economics Content Standards in the Primary Grades

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The Goals 2000 Educate America Act of 1994 included economics among the nine core subject areas that were targeted for the development of content standards. A new set of voluntary national content standards in economics, published in 1997, helped to guide administrators, teachers, and policy makers as they considered various educational objectives in the design of state-level content standards.¹ Today, almost all states have content standards in economics across grade levels, beginning with kindergarten. This study examines the status of economics in the primary grades by examining cross-state variation in all the economics concepts and principles specified in state standards for the primary grades—defined as kindergarten through fourth grade.

We find that states exhibit a wide variation in the types of economics standards they have implemented for their public schools. This variation means that some teachers face a very high bar in terms of the level at which they are expected to teach economics, while other teachers face a fairly low bar. The results are used to construct four groups of states that are defined by higher and lower degrees of completeness and specificity in their standards. These groupings, which show how particular states compare with other reference states, suggest that states with more complete standards are more likely to have grade-level breakdowns, while states with less complete standards tend to have economics standards defined by grade clusters.

The Development of Content Standards in Economics

Curricular reforms that emphasize instruction of economic concepts have

affected several generations of elementary-school students. The National Council on Economic Education (NCEE, formerly the Joint Council on Economic Education) has led efforts to encourage teachers and administrators to integrate economics directly into a central place in the social studies curriculum across grade levels. These efforts include the development and promotion of a host of economic courses, programs, and infusion efforts. For example, its EconomicsAmerica program involves statewide economics councils and university-based centers, helping schools and school districts develop economics curricula, set standards, and train teachers. This program grew out of the (now discontinued) Developmental Economic Education Program, which started in 1964 as an experimental teaching program to provide in-service training, curriculum planning, and help with testing.² Millions of students have been reached by these initiatives.

During the 1980s and 1990s, coinciding with the U.S. reform movement toward a standards-based system of education, the NCEE worked on formulating a voluntary national curriculum, commonly known as the *Master Curriculum Guide*. This curriculum guide—which was combined from several documents—provided a catalog of economic concepts and accompanying teaching materials.³ This voluntary set of concepts served as the predecessor of the current national standards. In 1994, the Goals 2000 Educate America Act recommended the development of standards in nine core subject areas, including economics. The NCEE lobbied for inclusion of economics in Goals 2000; it found funding for the development of the economic standards; and it brought other groups in economics and education together as a coalition to write content standards for the primary and secondary grades.

The new standards, published as the *Voluntary National Content Standards in Economics*, consist of 20 essential principles in economics.⁴ Each of the 20 principles is accompanied by a rationale for including that standard, a statement about how students can use this knowledge, and examples of activities and lessons that teachers can use to help students demonstrate or improve their understanding of the economics

Table 1. The Voluntary National Economics Standards and Selected Primary-Level Concepts

#	<i>Abbreviated Standard</i>	<i>Selected Concepts</i>
1	Productive resources are limited.	Scarcity, opportunity cost, wants and needs, resources, goods and services.
2	Effective decision making requires comparing the additional costs and benefits of alternatives.	Choice, costs and benefits, opportunity cost.
3	Different methods can be used to allocate goods and services.	Prices, sharing, distribution.
4	People respond predictably to positive and negative incentives.	Incentives, rewards, penalties.
5	Voluntary exchange occurs only when all participating parties expect to gain.	Exchange, barter, trade.
6	When individuals, regions, and nations specialize and trade with others, both production and consumption increase.	Specialization, productivity, interdependence.
7	Markets exist when buyers and sellers interact.	Markets, prices, producers, consumers.
8	Prices send signals and provide incentives to buyers and sellers.	Prices, supply and demand.
9	Competition among sellers lowers prices.	Competition, prices, quality.
10	Institutions evolve in market economies to help people accomplish their goals.	Saving, banks, borrowing, interest.
11	Money makes it easier to trade, borrow, save, and compare the value of goods and services.	Money, barter.
13	Income is determined by the market value of the productive resources people sell.	Human capital, income, wages, jobs.
14	Entrepreneurs take the risks of organizing productive resources to make goods and services.	Entrepreneurs, risk, invention, innovation.
15	Investment in factories, new technology, and in people can raise future standards of living.	Physical capital, technology, capital resources.
16	There is an economic role for government in a market economy.	Public goods, taxation, public borrowing.
19	Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs.	Unemployment, inflation.

Note: Only those standards with Grade 4 benchmarks are included. The numbering follows the NCEE numbers assigned to those principles.

Source: National Council on Economic Education (1997).

ideas. The standards also include a set of benchmarks (for grades 4, 8, and 12) that elaborate on the principles in increasingly sophisticated levels of attainment. Sixteen of the twenty voluntary standards have benchmarks for the fourth grade, which specify a set of primary-level economics principles that students are expected to know and use by the time they complete fourth grade. The NCEE provides a range of materials to help teachers incorporate the material into their curricula, and online lessons are linked directly to

each content standard. Also, a number of scholarly publications provide teachers with suggestions and strategies for teaching the standards.⁵

Table 1 contains a condensed version of the voluntary national standards in economics and some of the key fourth grade benchmarks. The table also contains a set of concepts that are found within the benchmarks, examples, and statements contained in the broader NCEE document. In evaluating the voluntary national standards, Hansen argues that the standards are accurate

and represent a consensus among economics educators.⁶ However, the rather cursory exposition in the standards document may make it difficult for educators and administrators to fully implement the new focus on principles. This challenge serves as an important motivation for examining, 10 years later, the extent to which state standards have incorporated the principles of the national voluntary standards and the degree to which they have elaborated on the fourth grade benchmarks.

The Incidence of Economics Standards across States

By the year 2000, almost all states (48), plus Washington D.C., included economics among their curriculum frameworks, learning objectives, and content standards. This figure represented a sharp increase from 38 states just two years earlier.⁷ As of early 2007, only one state (Iowa) still had no content standards in economics for any grades. To gain a better understanding of the economic principles and skills to which primary-grade students are currently exposed as a result of state-level standards, we conducted a state-by-state analysis of economics standards in the primary grades. The analysis followed three steps: tabulating an index of completeness, evaluating whether the standards are clear and specific, and recording the breakdown by grade levels or clusters. These evaluation criteria are based on several of the guidelines described in a report by the American Federation of Teachers on setting strong standards.⁸

In order to calculate the index of completeness, we read each state's economics content standards (usually contained as a strand in the social studies standards) found in the state department of education websites. We individually checked off each of the 16 principles found in the national economics standards if the state standards included that principle, or at least one of the associated concepts listed in Table 1. The underlying data to construct this index is a matrix of 51 by 16 scores, where each score corresponds to one of 51 states (including Washington, D.C.) and one of 16 economics principles. To evaluate whether the standards are clear and specific, we followed guidelines described in the 2003 AFT report to determine whether each state provided enough details, definitions, and examples to ensure that the exposition in the economics standards would lead to a common interpretation among educators. For the third criterion, we examined whether states followed the AFT rec-

ommendation that standards be articulated for particular grade levels rather than broad clusters.

The state-by-state results, which are reported in Table 2, show that almost all states have economics standards for every primary grade beginning with kindergarten. The large majority of states embed their economics standards as a strand within the social studies standards; just two states (Colorado and Pennsylvania) have stand-alone economics standards. None of the states have adopted the national standards in economics in their entirety as their official economics standards. Not only are the national economics standards voluntary, but states are also incorporating and combining several other national standards publications in the social sciences together with their own curricular objectives and state-specific constraints.⁹ Note that our evaluation is based on content standards posted online as of January 2007. As shown by the wide range of publication dates listed in Table 2, content standards do go through periodic revisions, and several websites provide a convenient list of links to all the states' current content standards in social studies.¹⁰

Table 2 indicates a high degree of variation across states in the completeness and clarity of their economics content standards. In the column with results for completeness, there are just a few states that address 90% or more of the economics principles endorsed in the national voluntary standards. The states with the highest scores include Delaware, Kansas, Nevada, and Pennsylvania. The majority of states—including three of the most populous states (California, Texas, and Florida)—have completeness indices ranging from 63% to 88%. A handful of states are still a long way from specifying content standards that come even reasonably close to addressing the principles and concepts recommended in the NCEE's national standards. Within the bottom tail of the state distribution, Wyoming covers just two of the sixteen recommended standards, and North Dakota

covers four of the sixteen. Alaska and Rhode Island have no primary-grade benchmarks, which effectively prevents sending any signal on which economics ideas, if any, primary-grade students are expected to learn.

The "Clear and Specific" column in Table 2 has simple yes/no results for whether or not states included sufficient examples, definitions, and explanations to ensure that each standard would lead to a common interpretation. Again, states exhibit a wide variation in the extent to which their official curricula elaborate on the details. For example, Idaho, a state with a "no" score, refers to the concept of saving in the third grade standards in this way: "Describe the purposes and benefits of savings." In contrast, Arkansas's third grade standards incorporate savings with the statement: "Identify and define ways of spending and saving," followed by four subsequent descriptions elaborating on the reasons why people save and how they save, and six suggested strategies for teaching these ideas. The final column of Table 2 records whether states disaggregate their standards (or benchmarks and expectations) by individual grade levels or whether the standards are presented for grade clusters. States exhibit much variation, with almost half of states breaking down their standards into individual grades, and the other half using some type of grade clusters, often K-4.

To help illustrate how states are aligned with each other, Figure 1 uses the data from the review of standards to show four groupings defined by higher and lower degrees of completeness and specificity in the primary-grade economics standards. The cutoff point for "more complete" is a score of 69% or higher for the completeness index, and the cutoff point for "more grade specific" is a breakdown by individual grade levels rather than a cluster. Both of these cutoff points are close to the median result, which makes the assignment of states to one of four quadrants fairly objective and transparent. The figure helps put the results from the previous

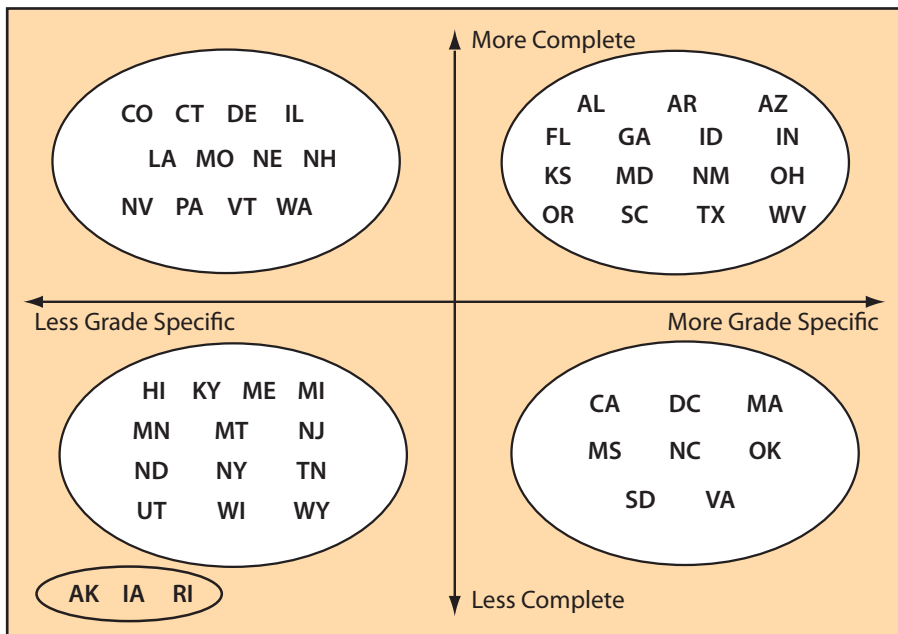
Table 2. Economics Content Standards and Curriculum Frameworks in the Primary Grades Across States in 2007

<i>State</i>	<i>Publication Year (Most Recent)</i>	<i>Completeness (% of Principles Addressed)</i>	<i>Clear and Specific For Common Interpretation</i>	<i>By Primary Grade Levels or Clusters</i>
Alabama	2004	81	Yes	K,1,2,3,4
Alaska	2006	–	No	K-12 cluster
Arizona	2006	88	Yes	K,1,2,3,4
Arkansas	2002	81	Yes	K,1,2,3,4
California	1998	63	Yes	K,1,2,3,4
Colorado	1998	81	Yes	K-4 cluster
Connecticut	1998	69	No	K-4 cluster
Delaware	2006	94	Yes	K-1, 2-3, 4-5 clusters
Florida	1999	69	No	K,1,2,3,4
Georgia	2004	88	Yes	K,1,2,3,4
Hawaii	1999	50	No	K-3, 4-5 clusters
Idaho	2006	75	No	K,1,2,3,4
Illinois	1997	88	No	Early & late elementary
Indiana	2006	81	Yes	K,1,2,3,4
Iowa	–	–	–	–
Kansas	2005	94	Yes	K,1,2,3,4
Kentucky	2001	38	No	K-5 cluster
Louisiana	1997	88	No	K-4 cluster
Maine	1997	44	No	K-2, 3-4 clusters
Maryland	2006	69	Yes	K,1,2,3,4
Massachusetts	2003	63	Yes	K,1,2,3,4
Michigan	1996	63	No	Early & late elementary
Minnesota	2004	38	Yes	K-3 cluster
Mississippi	2004	38	Yes	K,1,2,3,4
Missouri	1996	81	Yes	K-4 cluster
Montana	2000	44	No	K-4 cluster
Nebraska	2003	75	No	K-1, 2-4 clusters
Nevada	2000	100	Yes	K-2, 3, 4-5 clusters
New Hampshire	2006	81	No	K-2, 3-4 clusters
New Jersey	2004	63	No	K-2, 3-4 clusters
New Mexico	2001	81	No	K,1,2,3,4
New York	1996	56	No	Elementary
North Carolina	2003	63	Yes	K,1,2,3,4
North Dakota	2000	19	No	K-4 cluster
Ohio	2004	69	Yes	K,1,2,3,4
Oklahoma	2002	56	Yes	K,1,2,3,4
Oregon	2003	75	Yes	K,1,2,3,4
Pennsylvania	2003	94	Yes	K-3 cluster
Rhode Island	2001	–	No	K-12 cluster
South Carolina	2005	75	Yes	K,1,2,3,4
South Dakota	2006	63	Yes	K,1,2,3,4
Tennessee	2001	56	No	K-3, 4 clusters
Texas	1998	75	Yes	K,1,2,3,4
Utah	2000	38	No	3,4
Vermont	2004	75	Yes	K, 1-2, 3-4 clusters
Virginia	2001	63	Yes	K,1,2,3,4
Washington	1996	81	Yes	K-5 cluster
West Virginia	2006	81	Yes	K,1,2,3,4
Wisconsin	1998	44	No	K-4 cluster
Wyoming	2003	13	No	K-4 cluster
Washington DC	2006	50	No	K,1,2,3,4

Note: The results for completeness indicate the proportion of the 16 principles in Table 1 that states address in their content standards. The notation “–” indicates no standards or no elementary-school breakdowns.

Source: Authors’ review of all state department of education websites.

Figure 1. Primary-Level Economics Standards: State Groups According to Completeness and Specificity of Grade Levels, 2007



Note: States are grouped according to completeness (with 69% or more considered more complete) and grade-level specificity (with grade clusters considered less specific and a grade-level breakdown considered more specific).

table into perspective by showing how particular states compare with other reference states. It also suggests that states with more complete standards are more likely to have grade-level breakdowns, while states with less complete standards tend to have economics standards defined by grade clusters.

Which economics concepts are most commonly emphasized in the state standards for the primary grades? This question is addressed in Figure 2, which illustrates results from a tally of the number of states including these concepts in their state standards according to the methodology described above. Results indicate a fairly steep drop in the states' coverage of concepts that are potentially more difficult ideas to teach at the elementary-school level. Among the states with primary-grade content standards in economics, almost all include concepts related to scarcity, choice, markets, human capital, and physical capital. Surprisingly, the concepts of incentives and competition are not very common. The least common across states are inflation and unem-

ployment. Even though the national standards have a fourth-grade benchmark for inflation and unemployment, very few states introduce these ideas early in the primary grades.

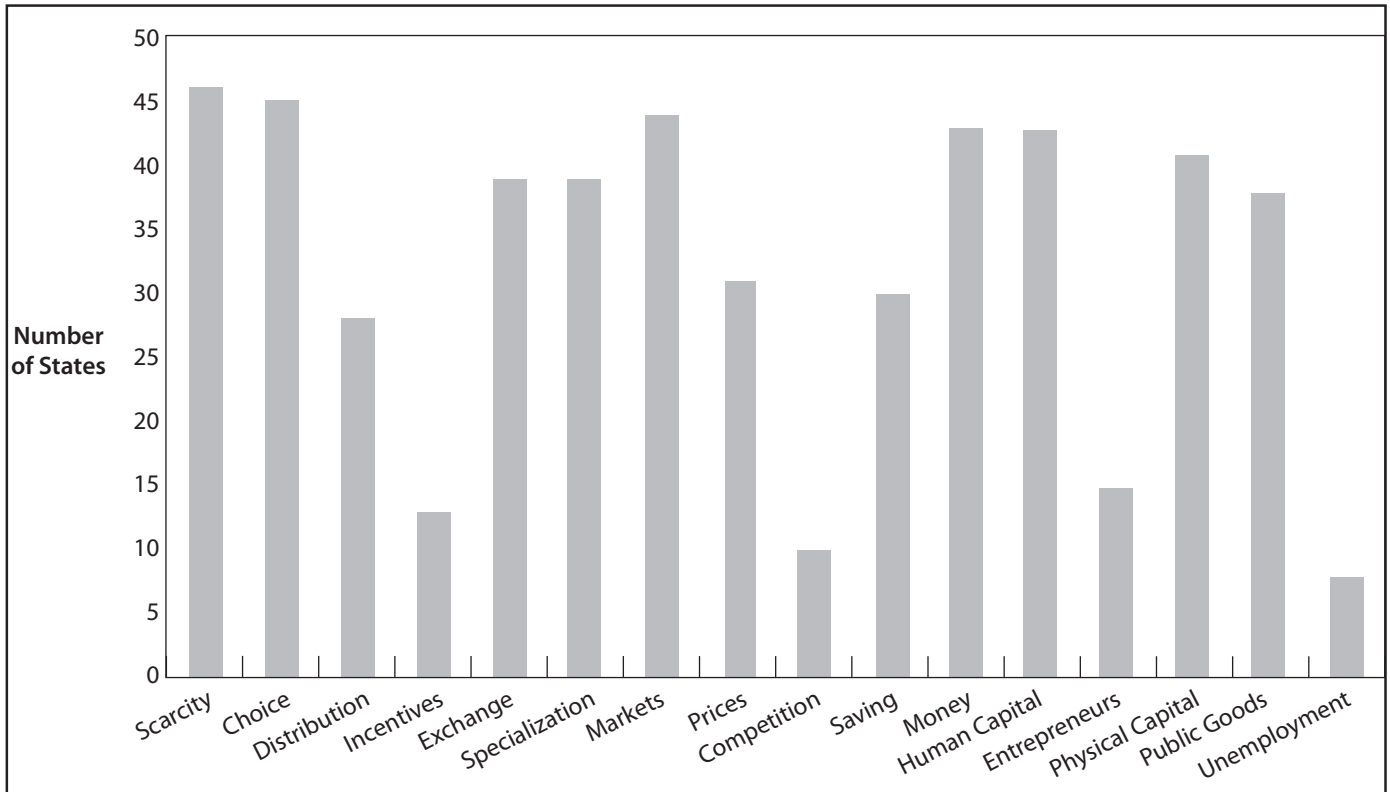
States may address specific concepts in their standards, but that does not mean these concepts are necessarily taught. State test requirements are a more reliable indicator of whether the standards are actually being taught. States that require testing are likely to have less within-state variation in the economics material that is being taught as compared to states without testing. This view is supported with evidence cited in Buckles, Schug, and Watts (2001) that assessments provide strong incentives for both teaching patterns and learning outcomes, as particular curricular items are allocated more time and emphasis in the classroom if instructors expect that those items will be included in the state tests. In comparing disciplines, classroom coverage of social science fields with strong mandates and testing requirements, such as history and government, tends to be greater than

“marginal” fields such as psychology and sociology, with economics holding a middle position.

A closely related issue is how well the elementary-school assessments are aligned with the state standards. Data from the American Federation of Teachers shed further light on these issues.¹¹ The 2001 AFT report shows that 28 states require student testing in social studies (including economics) in elementary school. More than one third of these states begin their testing as early as the second or third grade. The AFT report reviews state standards and test materials from each state with the objective of measuring the movement toward a standards-based education. The report evaluates the alignment of standards and assessments in social studies; economics is not evaluated separately. To meet the AFT's criteria on alignment, a state must be using a test that it developed itself, and it must specify the standards that are assessed. Alternatively, if a state is using an “off-the-shelf” commercially-developed test, then the state must release information about the share of standards that are aligned with the test material, and it must specify the standards that are assessed. Of the 28 states with social studies assessments in elementary school, the AFT report indicates that exactly one half have tests that are aligned with the elementary-school standards, and the other half have tests that are not aligned. The AFT concludes that the main problem for non-aligning states is that they fail to communicate the knowledge and skills for which students will be held accountable.

Consistent with results found by NCEE (2005), our review also indicates that more than half of all states now have standards related to personal finance. In almost all cases, any formal course requirements or testing are applicable only at the high school level. Although the incorporation of personal finance concepts into state standards was slow to gain acceptance, the complementarities between economic and personal finance education have helped to give personal finance a stronger place in the U.S. school

Figure 2. Incidence of Selected Concepts in States' Primary-Level Economics Standards, 2007



Note: The concepts along the X axis are abbreviated labels for the principles listed in Table 1. Incidence refers to the number of states (plus Washington, DC) which include at least one of the selected concepts for each principle in their state economics standards.

Source: Authors' review of all state department of education websites.

curriculum.¹² Personal finance education has also received increasing attention in policy discourse and the media, reflecting the importance that parents, educators, policymakers, and business leaders attach to equipping K-12 students with the skills and knowledge they need to make informed financial and marketplace decisions.

Conclusion

Almost all states now have economics standards across grade levels beginning with kindergarten; yet states still exhibit a substantial amount of variation in the particular economics principles and concepts they emphasize, the clarity and specificity with which their standards are written, and the degree to which standards are fine-tuned for particular grade levels or aggregated for grade clusters. Three states have no content standards in economics specified for primary-grade students, and another

13 states have standards that present primary-grade students with a fairly low bar to cross. The state-level variation may be explained by states' attempts to incorporate multiple national standards in disciplines that comprise the social studies as well as the teaching objectives of their own constituents. However, the concern lies in states that lag behind with superficial and incomplete coverage of economics ideas such as competition, entrepreneurship, and incentives that education and economics specialists consider of vital importance. The lagging states in particular could strengthen their approach to economics education in the primary grades by focusing on the central ideas recommended in the national standards and building upon these ideas each year in an increasingly sophisticated fashion. This approach is also being advocated for science education in grades K-8, which is currently undergoing calls for a new framework

involving a curriculum that is carefully coordinated across individual grades and is more clearly defined with new standards.¹³

Over half of the states begin their social-studies assessment efforts at the elementary-school level, as early as the second grade. With test scores linked to accreditation and funding, the development of effective teaching strategies in economics has taken on added urgency, as has the development of incentives and opportunities for elementary school teachers to enroll in economics training workshops and seminars. Yet testing does not serve as the only motivation for improved standards and teaching strategies in elementary school economics. Younger students enter school with an experience-based knowledge of economics and the ability to learn a range of basic principles during the early years. Early introduction of key economics principles provides an important set of

tools that form the building blocks of economic and financial literacy. This argument underlies the new emphasis in policy discourse on “the four R’s” (reading, writing, arithmetic, and readiness), as students gain valuable skills for workforce readiness, financially responsible consumption, and active civic participation. A primary-grade curriculum that carefully links economics ideas across grade levels is crucial for giving students a basic understanding of the economic and financial world around them. 📖

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Notes

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